

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION IX

75 Hawthorne Street San Francisco, CA 94105

WASTE MANAGEMENT DIVISION RCRA ENFORCEMENT OFFICE RCRA COMPLIANCE EVALUATION INSPECTION REPORT

Purpose:

RCRA Compliance Evaluation Inspection

Facility:

Pyramid Circuits, Inc. 1405 Richard Ave. Santa Clara, CA 95050

EPA ID Number:

CAD982472151

Date of Inspection:

April 7, 2011

EPA Representatives:

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RCRA Enforcement Officer

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Pyramid Circuits, Inc.

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Report Prepared By:

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Signature:

Report Date:

December 6, 2011

INTRODUCTION

The purpose of the investigation was to determine Pyramid Circuits, Incorporated's (herein "PCI" or the "facility"), compliance with applicable federal environmental statutes and regulations, and in particular, the Resource Conservation and Recovery Act ("RCRA"), as amended, the regulations provided in the Code of Federal Regulations ("CFR"), Chapter 40, Parts 261-265, 268, and 279, and the California Code Regulations ("CCR"), Title 22, Division 4.5 and the California Health and Safety Code, Division 20.

On April 7, 2011, Estrella Armijo, Amy Miller and Ann Murphy representing the U.S. Environmental Protection Agency ("EPA"), conducted an unannounced site investigation at the PCI facility (EPA ID Number CAD982472151), located at 1405 Richard Avenue, Santa Clara, California 95050. The EPA inspectors were accompanied by Angela Guiulani of the Santa Clara Fire Department.

Upon providing introductions and credentials to Lucio DeAnda, the inspectors explained that this was a routine inspection to determine if the facility was in compliance with federal and state regulations concerning the proper management of hazardous wastes. The inspection would consist of a walk-through of those areas of the facility where hazardous waste was handled, followed by a record review and a post-inspection briefing.

FACILITY BACKGROUND

| Facility Name Number of Employees | Pyramid Circuits, Inc. 2 part time, 3 full time |
|-----------------------------------|---|
| Hours of Operation | 8:00 AM to 5:00 PM 5 days/week |
| Facility Processes | PCI manufactures double-sided, ridged, printed circuit boards. |
| Waste Streams | The facility discharges pretreated rinse water from its copper and tin-lead plating processes and from the photo development and screen printing operations. According to the Department of Toxic Substances Control's Hazardous Waste Tracking System, the facility disposes of D002, D008, F006, F007 |
| Generator Status | Small Quantity Generator ("SQG") |
| Regulatory History | According to RCRAInfo the facility has never been inspected for compliance with RCRA Subtitle C. |

FACILITY INSPECTION

The facility has been at its current location for 25 years and manufactures double-sided, ridged, printed circuit boards. Their processes include drilling, plating, imaging and screening. The facility has a 180 day hazardous waste storage area ("HWSA") outside of the building, a waste water treatment system ("WWTS"), and a batch treatment system for drag out.

According to California Department of Toxic Substances Control's ("DTSC") Hazardous Waste Tracking System ("HWTS") the waste streams identified in Chart 1 below, have been manifested for disposal in the last five years.

Chart 1: Manifested Waste Summary for 2006 – 2010

| RCRA | | | | | 2000 | 2010 |
|------|--------------------------------------|---------|---------|---------|---------|---------|
| Code | Description | 2006 | 2007 | 2008 | 2009 | 2010 |
| D002 | Corrosives | | | | | |
| | | 0.91740 | | | | |
| D008 | Lead | | 5.96310 | 3.89895 | 5.04570 | 2.98155 |
| F006 | Wastewater treatment sludge | 0.45000 | 0.84280 | | 0.84280 | 0.75000 |
| F007 | Spent cyanide plating bath solutions | | | 0.02085 | | |
| | TOTALS | 1.36740 | 6.80590 | 3.91980 | 5.88850 | 3.73155 |

WALK THROUGH

The walk through consisted of a tour through the drilling room, plating lines, gold plating room, Imaging room, screening room, film area, QAQC area, shipping area, the WWTS, the batch tank operation, and the hazardous waste storage area ("HWSA"). Charts 2 and 3 below, describes the hazardous waste observed during the walk through of the process areas and HWSA, respectively.

Screening Room

The inspectors noted trash cans with contents emitting a strong acetone odor and requested a waste analysis. On May 4, 2011, PCI provided a waste determination for the contents of the trash in the screening room. The rags with acetone and solder mask are a D001 hazardous waste. PCI failed to make a waste determination prior to the inspection.

Plating Line

As the inspectors were led through the plating line, they cautioned the facility to maintain the process area by containing all used PPE and ensuring that secondary containment was kept dry and/or emptied daily. Rinse water is collected in the sump, where pH is adjusted and a polymer is added to enhance settling. The waste water is then pumped to two sequential holding tanks

and into a lamella clarifier for solids settling. The facility batch-treats drag-out from the plating operations. The drag-out is manually collected and pumped to one of three designated treatment tanks adjacent to the pretreatment system. The facility said the accumulation noted in the secondary containment was consistent with a day or two of operation. They later stated, in a follow up email that in the past the sump was emptied as needed but has been emptied daily for the last year. The facility should ensure that the sump is emptied daily and that they maintain a dry secondary containment.

The inspectors noted used PPE and rags throughout the plating line and requested a waste analysis. On May 4, 2011 PCI provided a waste analysis for the PPE and rags. They are a F006/D008 hazardous waste. The facility failed to make a waste determination for the PPE and rags prior to the inspection.

Gold Plating Room

The gold plating line had not been in use since February of 2008. It had several containers of what looked like expired chemical, useable chemical and waste. The inspectors requested the facility inventory the contents of the gold room. Below is a summary of the inventory provided on May 5, 2011.

| Item | Description | Quantity | Disposal/ Removal | Length of Time in Area |
|--|--------------------|----------|------------------------------------|---------------------------|
| Gold | 5 Gallon container | 1 | Waste is removed by outside vendor | 6 months |
| Spent Nickel | 5 Gallon container | 4 | Waste is removed by outside vendor | 6 months |
| Copper | 1 Gallon container | 1 | Waste Batch Treated | Not sure |
| Lead Fluoborate Solution | 5 Gallon container | 1 | New | 11/22/2010 |
| Ebonel C- blackening & coloring | 110 lbs | 1 | New | 11/19/2009 |
| Cuposit 328L Copper Mix Concentrate | 5 Gallon container | 2 | New | 3/3/2011 |
| Cuposit 328A Copper Mix Concentrate | 5 Gallon container | 1 | New | 2/24/2011 |
| Peptone | 5 Gallon container | 1 | New | |
| Screen Cleaner - OS-108 | 5 Gallon container | 1 | New | 5/5/2010 |
| Pumice | 45 lb bags | · 2 | New | 2 years |
| Liquid Nickel Sulfate | 5 Gallon container | 1 | Waste is removed by outside vendor | |
| Liquid Nickel Chloride | 5 Gallon container | 1 | Waste is removed by outside vendor | Participant |

Chart 3: Hazardous waste storage at Pyramid Circuits Inc. - HWSA

| Location | Container Type | Waste Type | Waste Description | Accum Start Date | Potential Violations | Comments (Photo Log Image Identification) |
|----------|--------------------------------|---|---|------------------------|---|--|
| HWSA | Six 55- gallon container | Spent Etch D002, D004, D007, D008 | Toxic, Corrosive, Liquid (Copper Solution) | 1/4/2011 | Failure to label a container of hazardous waste. | One of the 55-gallon containers was not labeled. |
| HWSA | 55-gallon container | D002, D004, D007, D008 | Copper tetramine dichloride, Chromium, Lead | 10/01/10 | Failure to obtain a permit for the storage of hazardous waste | The facility stored the 55-gallon container for 189 days. The waste was manifested for disposal on April 8, 2011. (IMG_0548-0549) At the time of inspection the label was mistakenly recorded at 10/11/10 and the facility cautioned to remove within 4 days, however upon further review it appears the container had already exceeded the SQG storage limit. |
| HWSA | 30-gallon container | Pb anode bags | Pb Anode bags | None | Failure to label a container of hazardous waste. Failure to close a container of hazardous waste. | (IMG_0553) |

Post Inspection

The facility completed the following action items in response to the April 7, 2011 inspection:

| Area/Item of Concern | Action Taken |
|---|--|
| Universal Waste - Light Bulbs in Drilling | Recycled on 4/23/11 |
| Unlabeled Tin Lead Satellite Storage | Labeled on 4/8/11 |
| Unlabeled Used Oil - hot oil machine | 1 Gallon - Recycled on 4/23/11, labeled container |
| Unoperational Gold Room Floor | Rust on floor was cleaned |
| Spill Kit & Alarm in Waste storage area | Air horn and labeled spill kit in storage area |
| Waste reaching storage limit in 4 days (as of 4-7-11) | Waste was removed on 4/8/11 - see Manifest |
| Items in Red Metal Trash Cans | See Waste Profile - satellite storage will be used |

Areas of Concern:

• PCI had not used their gold room since 2008 and was not keeping inventory of the products contained in the room. They had hazardous waste mixed with product and potentially expired chemical. PCI needs to ensure that inventory is taken in chemical storage areas and that hazardous waste is moved to the hazardous waste storage area.

Chart 2: Hazardous waste storage at Pyramid Circuits Inc.

| Location | Container Type | Waste Type | Waste Description | Accum Start | Potential Violations | Comments |
|---|--------------------------------|--------------------|--|----------------|---|---|
| Drilling Area | Uncontained | Universal Waste | 10 spent fluorescent tubes | Date None | Failure to label a container of hazardous waste. Failure to close a container of hazardous waste. | The tubes were located on a shelf in the drilling area. They were not contained or labeled. (IMG_0489-0490) |
| Gold Plating Room | Several | Unidentified | None | None | Failure to label hazardous waste | The Gold Plating room had chemicals that need to be identified as waste or product. The room was in very poor condition. There were several containers labeled spent nickel mixed with what appeared to be expired chemical and product. (IMG _0499-0506) |
| Plating area | 5-gallon bucket | Unlabeled | Tin-Pb Particles | None | Failure to label a container of hazardous waste. Failure to close a container of hazardous waste. | (IMG_0493) |
| Plating area – Hot Oil Machine | 2-gallon container | Unlabeled | Used Oil | None | Failure to label "used oil". | There was a significant amount of oil around the hot oil machine. There were three 1-gallon containers of unlabeled used oil, and two open approximately 5-gallon containers of unlabeled used oil ((IMG_0495 - 0498) |
| Plating area | 5-gallon bucket | Unlabeled | Rinse water containing copper and ammonia | None | Failure to label a container of hazardous waste. Failure to close a container of hazardous waste. | (IMG_0514) |
| Plating area | Two 55- gallon container | Unlabeled | Spent etchant (Corrosive) | None | Failure to label in a satellite accumulation area ("SAA"). Failure to close a container of hazardous waste in a SAA. Exceeding the 55-gallon storage limit in an SAA. | The facility had 2 55-gallon containers for the same waste stream in the same SAA. One of the drums was open with a funnel in it. (IMG_0519, IMG_0521-0522, IMG_0525) |
| Plating area | Two 5- gallon containers | Unlabeled | Copper solution tank clean out | None | Failure to label a container of hazardous waste. Failure to close a container of hazardous waste. | (IMG_0528) |

Hazardous Waste Storage Area

The hazardous waste storage area did not have emergency postings or an alarm system. A waste analysis of the dry film waste in the storage area was requested. On December 2, 2011 PCI provided an MSDS for the material stating it is non-hazardous.

- The facility should keep product and waste separate so it easily identified for employees and regulators.
- The hot oil machine in the plating area had oil pooling around it. PCI should ensure that no oil is spilled from the hot oil machine. If there is a spill, it should be cleaned up immediately and properly stored and disposed of.
- Housekeeping at the facility is poor and should be addressed. All spills should be cleaned up immediately and PPE and rags should be disposed of properly.
- The facility's chemical storage area was not properly segregated to prevent storing incompatibles next to each other.

RECORDS REVIEW

Manifests

No violations found

Land Disposal Restriction (LDR) Notifications

No violations found

Inspection Logs

Inspection logs for 2011 were reviewed. No violations were found.

<u>Potential Violations of California Title 22CCR and RCRA 40CFR Hazardous Waste</u> Regulations

Failure to Obtain a Permit for the "Storage" of "Hazardous Waste"

CCR §66262.34(d) 40 §CFR §262.34(d)

Requirements:

A generator who generates greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month may accumulate hazardous waste on-site for 180 days or less without a permit or without having interim status

Findings: The facility had one 55-gallon container of hazardous waste (D002, D004, D007, D008) in their HWSA with an accumulation start date of 10/01/10. The facility properly disposed of the hazardous waste on 4/8/2011. They exceeded the 180 day storage limit by 9 days.

Failure to Provide Required Equipment

22 CCR § 66265.32 40 CFR §265.32 as referenced by 40 CFR §262.34(d)(4)

Requirements:

All facilities must be equipped with the following,...

(a) An internal communications or alarm system capable of providing immediate emergency instruction(voice or signal) to personnel;

Findings: The facility did not have an alarm system at the time of inspection. The facility has since added an air horn and a labelled its spill kit in the hazardous waste storage area.

Failure to Post Required Emergency Response Information

22 CCR § 66265.32 40 CFR §265.32 as referenced by 40 CFR §262.34(d)(5)

Requirements:

The generator must post the following information next to the telephone:

- (A) The name and telephone number of the emergency coordinator;
- (B) Location of fire extinguishers and spill control material, and, if present, fire alarm; and
- (C) The telephone number of the fire department

Findings: The facility did not have emergency postings nears phones at the time of inspection. No information on the posted of emergency response information has been provided.

Failure to Meet Hazardous Waste Container Labeling Requirements

22 CCR § 66262.34 40 CFR § 262.34 (d)(4)

Requirements:

- (d) A generator who generates greater than 100 kilograms but less than 100 kilograms of hazardous waste in a calendar month may accumulate hazardous waste on-site for 180 days or less without a permit or without having interim status provided that:
- (4) The generator complies with the requirements of paragraphs (a)(2) and (a)(3) of this section...
- (a)(2) the date upon which each period of accumulation begins is clearly marked and visible for inspection on each container; and
- (a)(3) the generator complies with the requirements of subsection (f) of this section;
- (f) Generators who accumulate hazardous waste on site without a permit or grant of interim status shall comply with the following requirements: (2) the date the applicable accumulation period specified in subsection (a) or (d) of this section begins, for purposes of subsections (a) and (b) of this section, shall be clearly marked and visible for inspection on each container and tank; and (3) each container and tank used for onsite accumulation of hazardous waste shall be

labelled or marked clearly with the words, "Hazardous Waste." Additionally, all containers and shall be labelled with the following information:

- (A) composition and physical state of the wastes;
- (B) statement or statements which call attention to the particular hazardous properties of the waste (e.g., flammable, reactive, etc.);
- (C) name and address of the person producing the waste.

Findings: PCI failed to label containers of hazardous waste in the HWSA, plating area and Gold Room. The facility did not label one 55-gallon container of spent etch and one 30-gallon container of Pb anode bags in the HWSA. They failed to label one 5-gallon container of Tin-Pb waste, one 5-gallon container of rinse water, and two 5-gallon containers of tank cleanout waste in the plating area. The gold room, last operated in 2008, stored one 5-gallon container of liquid nickel sulfate, one 5-gallon container of liquid nickel chloride, four 5-gallon containers of spent nickel, one 5-gallon container of gold plating was and one 1-gallon container of non-RCRA hazardous waste; none of the containers were labeled. PCI has since properly disposed these wastes.

Failure to Close a Container Holding Hazardous Waste

22 CCR §66265.173 40 CFR 265.173(a) as referenced by 40 CFR §262.34(a)(4)

- (a) A container holding hazardous waste shall always be closed during transfer and storage, except when it is necessary to add or remove waste.
- (b) A container holding hazardous waste shall not be opened, handled, transferred or stored in a manner which may rupture the container or cause it to leak. Re-use of containers for transportation shall comply with the requirements of the U.S. Department of Transportation regulations, including those set forth in 49 CFR section

Findings: The facility failed to close containers in the HWSA and the plating area. Specifically, they did not close one 5-gallon container of Tin-Pb waste, one 5-gallon container of rinse water, and two 5-gallon containers of tank cleanout waste in the plating area and one 30-gallon container of Pb anode bags in the HWSA.

Satellite Accumulation Area (SAA)

Failure to Accumulate Less than 55-gallons of Hazardous Waste in a Satellite Accumulation Area

22 CCR § 66262.34(e)(1) 40 CFR § 262.34(c)(1)

(e)(1) A generator may accumulate as much as 55 gallons of hazardous waste, one quart of acutely hazardous waste (listed in section 66261.33(e)) or one quart of extremely hazardous waste at or near any point of generation, without a permit or grant of interim status, without complying with subsections (a), (b) and (c) of this section, if all of the following requirements are met with respect to this waste:

Findings: The facility was accumulating two unlabeled 55-gallons containers of spent etchant in plating area. No information on the status of this SAA was provided.

Failure to Label Hazardous Waste in a Satellite Accumulation Area

22 CCR § 66262.34(C), (E) & (f)(3) 40 CFR § 262.34 (c)(1)(ii)

- (C) the initial date of waste accumulation is clearly marked and visible for inspection on each container used for accumulation of hazardous waste;
- (E) the generator complies with subsections (e)(2), (e)(3) and (f)(3) of this section
- (f) Generators who accumulate hazardous waste on site without a permit or grant of interim status shall comply with the following requirements clearly with the words, "Hazardous Waste." Additionally, all containers and portable tanks shall be labeled with the following information:
 - (3) each container and tank used for onsite accumulation of hazardous waste shall be labeled or marked clearly with the words, "Hazardous Waste." Additionally, all containers and portable tanks shall be labeled with the following information:
 - (A) composition and physical state of the wastes;
 - (B) statement or statements which call attention to the particular hazardous properties of the waste (e.g., flammable, reactive, etc.);
 - (C) name and address of the person producing the waste.

Findings: The facility was accumulating two unlabeled 55-gallons containers of spent etchant in plating area. No information on the status of this SAA was provided.

Universal Waste

Failure to Label Universal Waste

22 CCR § 66273.14(c) 40 CFR § 273.14 (d)(1)

Each lamp or a container or package in which such lamps are contained shall be labeled or marked clearly with one of the following phrases: "Universal Waste-Lamps(s)," or "Waste Lamp(s)," or "Used Lamp(s)."

Note: In 2009, California's regulations covering labeling/marking requirements for universal waste changed. The new citation for lamps, 22 CCR § 66273.34, states:

(c) Lamps (including M003 wastes that contain lamps) (i.e., each lamp), or a container or package in which the lamps are contained, shall be labeled or marked clearly with the following phrase: "Universal Waste-Lamp(s)".

Findings: The facility had 10 unlabeled universal waste lamps in the drilling area. The lamps were recycled on 4/23/2011.

Failure to Properly Manage Universal Waste

22 CCR § 66273.33(b)(1)

40 CFR § 273.13 (c)(1)

A universal waste handler shall contain any lamp in a container or package that is structurally sound, adequate to prevent breakage, and compatible with the contents of the lamp. Such a container or package shall remain closed and shall lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

Findings: The ten unlabeled universal waste lamps in the drilling area were not in closed containers. The lamps were recycled on 4/23/2011.

Failure to Demonstrate the Length of Time Accumulating Universal Waste

22 CCR § 66273.35 40 CFR § 273.15 (c)

- (a) A universal waste handler shall accumulate universal waste for no longer than one year from the date the universal waste was generated, or was received from another universal waste handler.
- (b) A universal waste handler shall be able to demonstrate the length of time that the universal waste has been accumulated from the date it became a waste or was received. The universal waste handler may make this demonstration by:
- (1) Placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received;
- (2) Marking or labeling the individual item of universal waste (e.g., each battery or thermostat) with the date it became a waste or was received;
- (3) Maintaining an inventory system onsite that identifies the date the universal waste being accumulated became a waste or was received;
- (4) Maintaining an inventory system onsite that identifies the earliest date that any universal waste in a group of items of universal waste or a group of containers of universal waste became a waste or was received;
- (5) Placing the universal waste in a specific accumulation area and marking or labeling the area to identify the earliest date that any universal waste in the area became a waste or was received; or
- (6) Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it became a waste or was received

Findings: The facility was not able to clearly demonstrate the length of time that the universal waste had been accumulating. The lamps were recycled on 4/23/2011.

Potential Violations of California Title 22 CCR:

Failure to Label Used Oil

22 CCR §66279.21

- (a) Generators of used oil shall comply with the requirements of chapter 12 of this division (commencing with Section 66262.10).
- (b) Containers and aboveground tanks used to store used oil and fill pipes used to transfer used oil into underground storage tanks shall be marked or clearly labeled with the words "USED OIL".

Findings: The facility had three 1-gallon containers of unlabeled used oil, and two open approximately 5-gallon containers of unlabeled used oil. The facility recycled 1 gallon or used oil on 4/23/11 and labeled a container. It is not clear if all of the containers identified are currently labeled and properly stored.

Photo Log

| Image Identification | Number | Location | Description |
|----------------------|----------|-------------------------------------|--|
| IMG_0488 | 1 | Outside front | Photo of sign outside of Pyramid Circuits |
| | | | Drilling Room photos of unlabeled, uncontained |
| IMG_0489 | 2 | Drilling Room | universal waste |
| | | | Drilling Room photos of unlabeled, uncontained |
| IMG_0490 | 3 | Drilling Room | universal waste |
| | | | |
| IMG_0491 | 4 | Plating Area | Secondary containment around plating line |
| IMG_0492 | 5 | Plating Area | Photo of plating area |
| IMG_0493 | 6 | Plating Area | Pb bars said to be recycled |
| | | | Open 5-gallon bucket of tin-Pb particles, open and |
| IMG_0494 | 7 | Plating Area | unlabeled |
| IMG_0495 | 8 | Oil | Hot oil machine |
| | | | Open container of used oil/ Oil spilled throughout |
| IMG_0496 | 9 | Oil | area |
| IMG_0497 | 10 | Oil | Photo of leaking hot oil machine |
| | | | |
| IMG_0498 | 11 | Oil | Three 1-gallon containers of used oil not labeled |
| | | | The Table of the transfer of t |
| IMG_0499 | 12 | Gold Plating Room | Several containers of stored chemical and waste |
| IMG 0500 | 13 | Gold Plating Room | Spent nickel waste from gold baths |
| IMG_0501 | 14 | Gold Plating Room | Spent nickel waste from gold baths |
| IMG_0502 | 15 | Gold Plating Room | Spent nickel waste from gold baths |
| IMG 0503 | 16 | Gold Plating Room | Spent nickel waste from gold baths |
| IMG_0504 | 17 | Gold Plating Room | Spent nickel waste from gold baths |
| IMG_0505 | 18 | Gold Plating Room | Spent nickel waste from gold baths |
| IMG_0506 | 19 | Gold Plating Room | Open container of nickel waste |
| | 4.0 | room rading Room | Containers and staining below baths in gold |
| IMG_0507 | 20 | Gold Plating Room | plating room - rust |
| | | Cold Flating Room | practing room - rust |
| IMG_0508 | 21 | Gold Plating Room | Staining below baths in gold plating room - rust |
| | <u> </u> | Cold Flathing Room | Stanning below baths in gold plating 100111-10st |
| IMG_0509 | 22 | Gold Plating Room | Staining below baths in gold plating room - rust |
| | | Cold Flating Noom | Staining below baths in gold plating room and pH |
| | | | strip being inserted to liquid accumulation behind |
| | | | nitric acid and water in other side of gold plating |
| IMG_0510 | 23 | Gold Plating Room | room wall |
| 11110_0310 | ۲٠ | Gold Flating Noon | · |
| | | | Close up of liquid passent lating bakind within a side |
| IMG_0511 | 24 | Cold Disting Doom | Close up of liquid accumulation behind nitric acid |
| IMG_0511 | | Gold Plating Room Gold Plating Room | and water other side of gold plating room wall |
| 11/10_0312 | | Gold Flating Room | pH strip results |
| IMG_0513 | 26 | Cold Blating Bases | altered in the second of the second |
| IIMG_0313 | 26 | Gold Plating Room | pH strip results comparison with unused pH strip |
| INAC OF14 | 27 | Distinct Augus | On an area to be a second of |
| IMG_0514 | 27 | Plating Area | Open container of waste ammonia and copper |
| IMC 0515 | 20 | Diating Auss | Total Frankland and the Control of |
| IMG_0515 | | Plating Area | Two 5-gallon containers of unlabeled waste |
| IMG_0516 | | Plating Area | Waste containers poor housekeeping |
| IMG_0517 | 30 | Plating Area | Waste containers poor housekeeping |

| IMG 0518 | 31 | Plating Area | Waste containers poor housekeeping |
|----------|----|-----------------------|---|
| IMG_0519 | 32 | Plating Area | Funnel in 55-gallon drum in SAA |
| IMG_0520 | 33 | Plating Area | Waste containers poor housekeeping |
| | | | 55-gallon container of hazardous waste in SAA not |
| IMG_0521 | 34 | Plating Area | labeled |
| | | | |
| | | | 55-gallon container of hazardous waste in SAA not |
| IMG_0522 | 35 | Plating Area | labeled exceeding 55-gallon storage limit |
| | | | |
| IMG_0523 | 36 | Plating Area | Secondary containment around plating line |
| IMG_0524 | 37 | Plating Area | Rinse tank with hose for pumping in tank |
| IMG_0525 | 38 | Plating Area | 55-gallon drum in SAA |
| | | | Sump - location of pumping measurement of |
| IMG_0526 | 39 | Plating Area | liquid accumulation |
| IMG_0527 | 40 | Plating Area | Sump - location of pumping |
| | - | | |
| IMG_0528 | 41 | Plating Area | Two open containers of copper solution waste |
| IMG_0529 | 42 | Plating Area | Ramp to exit plating area |
| IMG_0530 | 43 | Screening Room | Screening Room Debris |
| IMG_0531 | 44 | Screening Room | Screening Room Debris |
| IMG_0532 | 45 | Screening Room | Screening Room Debris |
| | | | |
| IMG_0533 | 46 | Ramp | Ramp between chemical storage area and HWSA |
| IMG_0534 | 47 | HWSA/ Storage Area | Overview shot |
| | | HWSA/ batch treatment | • |
| IMG_0535 | 48 | area | Overview shot |
| IMG_0536 | 49 | Storm Drain | Storm Drain |
| IMG_0537 | 50 | Storage Area | Storm Drain |
| IMG_0538 | 51 | Storage Area | Used battery on ground |
| IMG_0539 | 52 | Storage Area | 5-gallon container of linseed oil |
| IMG_0540 | 53 | Storage Area | Open obsolete plating bath with trash |
| IMG_0541 | 54 | HWSA | Staining from container |
| IMG_0542 | 55 | HWSA | Sump in HWSA |
| IMG_0543 | 56 | HWSA | Overview of HWSA |
| IMG_0544 | 57 | HWSA | Copper Solution 1/4/11 |
| IMG_0545 | 58 | HWSA | Copper Solution 1/4/11 |
| IMG_0546 | 59 | HWSA | Copper Solution 1/4/11 |
| IMG_0547 | 60 | HWSA | Copper Solution 1/4/11 |
| IMG_0548 | 61 | HWSA | Corrosive Liquid 10/01/10 |
| | , | | Close up of accumulation start date on corrosive |
| IMG_0549 | 62 | HWSA | liquid 10/01/10 |
| | | | |
| IMG_0550 | 63 | HWSA | Tote of copper filter cake with lead12/13/10 |
| | | | Close up of label of copper filter cake lead |
| IMG_0551 | 64 | HWSA | 12/13/10 |
| | | | Close up of label of copper filter cake lead |
| IMG_0552 | 65 | HWSA | 12/13/10 |
| IMG_0553 | 66 | HWSA | Open container of lead anode bags |
| IMG_0554 | 67 | HWSA | Open container of dry film sludge |

| IMG_0555 | 68 | HWSA | Sump | |
|----------|----|-----------------------|----------------------------|--|
| IMG_0556 | 69 | HWSA | Sump | |
| IMG_0557 | 70 | Chemical Storage Area | Incompatible Waste Storage | |
| IMG_0558 | 71 | Chemical Storage Area | Incompatible Waste Storage | |







IMG_0558